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Run on:
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                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
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Maximum DB seq length: 2000000000
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                              Database :
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1709
                                                                                                                                                                                                                                                                                                                                                           562222 seqs, 172994929 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 4.5
Copyright (c) 1993 - 2000 Compugen Ltd.
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pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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4 Q982R7 4 Q960R5 11 Q9CPT0 11 Q9CPT0 11 Q9D3W3 4 Q96196 4 Q96196 5 11 Q35843 5 11 Q9QWX2 6 4 Q9H1R6 7 11 Q99N35 7 11 Q9N1A2 3 6 Q9N1A2 3 6 Q9N1A2 3 6 Q9NXN3 3 3 Q9P655	:
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ALIGNMENTS

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Best Local S
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01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
APOPTOSIS REGULATOR BCL-G LONG FORM.
                                                                                                                                                                                                                                                                                 Q9BZR8
                                                                                                                                                                                                          Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                           / Match 100.0%; Score 1709; DB 4; Length 327; Local Similarity 100.0%; Pred. No. 1.1e-129; Local Similarity 0; Mismatches 0; Indels 0; les 327; Conservative 0; Mismatches 0; Indels 0;
PRELIMINARY;
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Q96QR5;
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01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
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                                                                                                                                                                                         181 FYTEGLSFOLOGHYPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKK-----DKAL 233
                                                                                                                                               241 QGFPQDGL 248
                                                                                                                                                                       234 MGHFQDGL 241
                                                                                                                                                                                                                                              121 EYODSHSQQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEI 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-21264734; PubMed=11054413; Guo B., Godzik A., Reed J.C.; "Bcl-G, a novel pro-apoptotic member of the Bcl-2 family."; J. Biol. Chem. 276:2780-2785(2001).
EMBL; AF281255; AAG59794.1; SEQUENCE 252 AA; 28089 MW; 87D2E5123EFCB9E4 CRC64;
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01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
APOPTOSIS REGULATOR BCL-G SHORT FORM.
                                                                                                                                                                                                                                                                                  61 CSANESWTEVSWPCRNSOSSEKAINLGKKKSSWKAFFGVVEKEDSOSTPAKVSAGGORTL 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota;
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                                                                                                                                                                                                                                                                                                                                                        1 MCSTSGCDLEEIPLDDDDLNTIEFKILAYYTRHHVFKSTPALFSPKLLRTRSLSQRGLGN 60
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                                                                                                                                                                                                                                                                                                                                                                                            69.6%; Score 1189.5; DB 4; Leug...
93.5%; Pred. No. 5.4e-88;
... Mismatches 7; Indels
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RC STALIN=CSDEL/GJ. TISSUE=COLON, STOMACH, AND TESTIS;

RX MEDLINE=2108560; PubMed=11217851;

RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,

RA Aizawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Aizawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,

RA Aizawa T., Hara A., Fukunishi Y., Konno H., Kasukawa T., Saito R.,

RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

RA Kuchi P., Lewis S., Matsuda T., Gissi C., King B., Kochiwa H.,

RA Kuchi P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Bashio T.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

RA Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,

RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,

RA Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F.,

RA Mynshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,

RT "Functional annotation of the service of the 
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"Functional annotation of a full-length mouse cDNA collection.";
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01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-JUN-2001 (TREMBLrel. 17, Last sequence update)
9030625M01RIK PROTEIN (4933405K19RIK PROTEIN).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AY040274; AAK72109.1; -
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"A detailed transcriptional map of the chromosome 12p12 tumor suppressor locus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 CSANESWTEVSWPCRNSOSSEKAINLGKKKSSWKAFFGVVEKEDSOSTPAKVSAOGORTL 120
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Similarity 99.1%;
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30948 MW; 81559A7190F5598E CRC64;
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         EMBL; ANULOGIV; ENDIGICATION (MGD; MGI:1914063; 9030625M01Rik.

MGD; MGI:1914796; 4933405K19Rik.

MGD; MGI:1914796; 4933405K19Rik.

InterPro; IPR002475; BCL2_famlly:
InterPro; IPR000572; Euk_Oxidored_molyb.

INTERPO; PROSOSS; MCLYBDOPTERIN_EUK; UNKNOWN_1.

PROSITE: PS00559; MCLYBDOPTERIN_EUK; UNKNOWN_1.

SEQUENCE 328 AA; 36991 MW; FAC47379F008314C CRC64;
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RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii Y.,
RA Kawai J., Shinagawa A., Shibata K., Yoshino M., Adachi J., Fukuda S.,
RA Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
RA Arakawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
RA Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,
RA Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,
RA Kidota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
RA Kidota K., Matsuda H.A., Ashburner M., Batalov S., Quackenbush J.,
RA Kidota K., Matsuda H.A., Nikaido I., Peoole G., Quackenbush J.,
RA Kidota K., Matsuo Y., Nikaido I., Peoole G., Quackenbush J.,
RA Kidota K., Matsuo Y., Nikaido I., Peoole G., Quackenbush G.,
RA Kidota K., Matsuo Y., Nikaido I., Peoole G., Quackenbush G.,
RA Kidota K., Matsuo Y., Nikaido I., Peoole G., Quackenbush G.,
RA Kidota K., Matsuo Y., Nikaido I., Peoole G., Quackenbush G.,
RA Kidota K., Matsuo Y., Nikaido I., Barsh G.,
RA Kidota K., Matsuo Y., Nikaido I., Barsh G.,
RA Kidota K., Matsuo Y., Nikaido I., Barsh G.,
RA Kidota K., Matsuo Y., Nikaido I., Barsh G.,
RA Kidota K., Matsuo Y., Pietcher C., Fujita M., Gariboidi M.,
RA Brownstein M.J., Bult C., Pietcher C., Fujita M., Gariboidi M.,
RA Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
RA Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
RA Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119 --TLEYODS-HSQQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQA-GG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120 PFPVEROSGFHNOHWPRSLSSVEORLESEVVDSKVACIANRVABIVYSWPPPDVIHSQGG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      175 FKSKEIFVTEGLSFQLQGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKKDKALM 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 CSANESWTEVSWPCRNSOSSEKAINLGKKKSSWKAFFGVVEKEDS-OSTPAKVSAQGQR- 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  235 GHFQDGLSYSVFKTITDQVLMGVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVL 294
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            180 SKLKE-RVSEILYFREEG----PCDSKNKDGEDQIISKIVELLKFSGDQLGREIKKDKALM 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 WS-TDSWTQVSLPCRGSPSSEKNISLGKKKSSWRTLFRVAEKEEGLPSSPKEIRAQGPQG 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        236 SSFQDGLSYSTFKTITDLFLRDVDTRGESEVKARGFKAALAIDAIAKLTAIDNHPMNRML 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 MCSTSGCDLEEIPLDDDDLNTIEFKILAYYTRHHVFKSTPALFSPKLLRTRSLSQRGLGN 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9D3W3;
Q1-JUN-2001 (TrEMBLrel. 17, Created)
Q1-JUN-2001 (TrEMBLrel. 17, Last sequence update)
Q1-JUN-2001 (TrEMBLrel. 17, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MCSTSVYDLEDIPLEDDDPNSIEFKILAFYARHHVEKNTPAVFSPKLSRTRSLSQKALGT 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      296
                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9D3W3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           295 GFGTKYLKENFSPWIQQHGGWEKILGISHEEVD 327
                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
STRAIN-C57BL/6J; TISSUE-TESTIS;
STRAIN-C57BL/6J; PubMed-11217851;
MEDLINE-21085660; PubMed-11247851;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4933405K19RIK PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=10090;
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AK008682; BAB25830.1;
AK016670; BAB30370.1;
AK016670; BAB30370.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GFGTKYLREYFSPWVQQNGGWEKILGISHEEVD 328
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pred. No. 3.3e-79;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hayashizaki Y.;
"Functional annotation of a full-length mouse cDNA collection.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nature 409:685-690(2001).
EMBL; AK016997; BAB30545.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MGD; MGI:1914796; 4933405K19Rik
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 --TLEYODS-HSQQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQA-GG 174
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        180 SKLKE-RVSEILYFREEG---PCDSKNKDGEDQITSKIVELLKFSGDQLGREIKKDKALM 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120 PFPVEROSGFHNOHWPRSLSSVEORLESEVVDSKVAFIANRVAEIVYSWPPPDVIHSQGG 179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61 CSANESWIEVSWPCRNSOSSEKAINLGKKKSSWKAFFGVVEKEDS-OSTPAKVSAQGQR- 118
                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 WS-TDSWTQVSLPCRGSPSSEKNISLGKKKSSWRTLERVAEKEEGLPSSPKEIRAQGPQG 119
                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236 SSFODGLSYSTFKTITDLFLRDVDTRGESEVKARGFKAALAIDAIAKLTAIDNHPMNRML 295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              235 GHEQDGLSYSVFKTITDQVLMGVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVL 294
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                                                                                                                                                                                                                                                                                                                                                                  O9HB09 PRELIMINAL,
O1-MAR 2001 (TYENBLICE) 16, Created)
O1-MAR 2001 (TYENBLICE) 16, Last sequence update)
O1-MAR 2001 (TYENBLICE) 19, Last annotation update)
O1-DEC-2001 (TYENBLICE) 19, Last annotation update)
BCL-2 RELATED PROLINE-RICH PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MCSTSVYDLEDIPLEDDDPNSIEFKILAFYARHHVFKNTPAVFSPKLSRTRSLSQKALGT 60
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                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                      "Molecular cloning, physical mapping, and expression analysis of a novel gene, BCL2L12, encoding a proline-rich protein with a highly conserved BH2 domain of the Bcl-2 family."; genomics 72:717-221(2001).

GROWICS 72:717-221(2001).

GROWICS 72:717-221(2001).
                                                                                                             SEQUENCE
                                                                                                                                                                                                                                      MEDLINE=21295042; PubMed=11401436;
                                                                                                                                                                                                                                                                                      NCBI_TaxID=9606;
                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FKSKEIFVTEGLSFQLQGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKKDKALM 234
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  σ
                                              Local
67 WTEVSW---PCRNSQSSEKAINLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTLEYQ 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; IPR002475; BCL2_family.
PS50062; BCL2_FAMILY; 1.
PS50062; BCL2_FAMILY; 1.
328 AA; 37036 MW; 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                     334 AA;
                                                                                                                                                                                                                          Kyriakopoulou L., Yousef G.M., Ashworth L.K., Kwamie A.,
                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7.3%; Score 124; DB 4
22.9%; Pred. No. 0.053;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7919C5A4441C62C4 CRC64;
                                            43; Mismatches 118; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     334 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64; Indels 11; Gaps
                                                                               DB 4; Length 334;
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035844
                                          RESULT
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                                                              211 ----GTLAGLSVEHV-HSFTPWTQAHGGWEGTLAVS 241
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                                                                                        287 NHPMNRVLGFGTKYLKENFSPWIQQHGGWEKILGIS 322
                                                                                                       156 -RLSSDSFARLVELFCSRDDSSRPSRACPGPSPPSPEPLA----RLALAMELSRRVAGLG 210
                                                                                                                                 239 DGLSYSVEKTITD-------QVLMGVDPRGESEVKAQGFKAALVIDVTAKLTAID 286
                                                                                                                                                           113 -----ELQG------PPSTEKEAILRRLVALLEBEAEVINQKLASDPALRSKLV 155
                                                                                                                                                                               179 EIFVTEGLSFOLOGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKKDKALMGHFQ 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                           119 TLEYQDSHSQQWSRCLSNVEQCLEHEAVDPKVISIANRVABIVYSWPPPQATQAGGFKSK 178
                                                                                                                                                                                                                                                                                                                                                                                                                                             Strausberg R;
Strausberg R;
Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; BC007724; AAH07724.1;
SEQUENCE 250 AA; 26897 MW; 619B6F67DBF73664 CRC64;
                                                                                                                                                                                                                 98 ------PSP------ 112
                                                                                                                                                                                                                                                                        60 RGAAPSESPRPCSLPIR-------PCYGL---EPGPATPDFYALVAQR 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
TISSUE-UTERUS, AND LEIOMYOSARCOMA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         096196;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
SIMILAR TO RIKEN CDNA 5430429M05 GENE.
                                                                                                                                                                                                                                                                                                  60 NCSA-NESWTEVSWPCRNSQSSEKAINLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQR 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                        10 EEIPLDDDDLNTIEFKILAYYTRHHVFKSTPALFSPK-----LLRTRSLSQRGLG 59
                                                                                                                                                                                                                                                                                                                            5 EELGLREDTL-----RVLAAFLRRGEAAGSPVPTPPRSPAQEEPTDFLSRLRRCLPCSLG 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        96196
                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              279 TAKLTAIDNHPMNRVLGFGTKYLKENFSPWIQOHGGWEKILGIS 322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 231 DPÅLRSKLV-RLSSDSFARLVELFCSRDDSSRPSRACPGPPPPSPEPLA----RLÄLAMEL 286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         230 DKALMGHFQDGLSYSVFKTITDQVLMGVD------PRGESEVKAQGFKAALVIDV 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     178 VAQRLEQLVQEQLKSPPSPELQG-----PPSTEKEAILRRLVALLEEEAEVINQKLAS 230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                174 GFKSKEIFVTEGL----SFQLQGHVPVASSSKKDEEEQILAKIVELLKYSGDQLERKLKK 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          129 D-----FLSRLRRCLPCSLGRGAAPSESPRPCSLPIRPC---YGLEPGPATPDFYAL 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124 DSHSQQWSRCLSNVEQCL-----EHEAVDPKVISIANRVAEIVYSWPPPQAT---QAG 173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72 WRRRRWGPGPGASMAGSEE---LGLREDTLRVLAAFLRRGEAAGSPVPTPPRSPAQEEPT 128
      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                          7.1%; Score 121; DB 4
20.2%; Pred. No. 0.062;
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 PRT;
233 AA.
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035843
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R SMART; SM00337; BCL; 1.

R PROSITE; PS50065; BH4; 1.

DR PROSITE; PS61080; BH1; 1.

DR PROSITE; PS01258; BH2; 1.

DR PROSITE; PS01259; BH3; 1.

DR PROSITE; PS01259; BH3; 1.

DR PROSITE; PS01260; BH4, 1; 1.

SO SEQUENCE 233 AA; 26033 MW; 3083F2D8327E072E CRC64;
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
                                                               035843 PRELIMINARY; PRT;
035843; PRELIMINARY; PRT;
01-JAN-1998 (TrEMBLrel 05, Created)
01-DEC-2001 (TREMBLrel 05, Last sequence)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                         BCL2L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                           179 EPWIQENGGWDTFVDL 194
                                                                                                                                                                                                                   306 ЅРWIQQHGGWEKILGI 321
                                                                                                                                                                                                                         124 EQVVNELFRDGVN--WGRIVAFFSFGGALCVESVDKEMQV---LVSRIASWMATYLNDHL 178
                                                                                                                                                                                                                                                  247 KTITDOVLM-GVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENF 305
                                                                                                                                                                                                                                                                                           191 QGHVPVASSSKKDBEEQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQDGLSYSVF 246
                                                                                                                                                                                                                                                                                                                                                        131 SRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEIFVTEGLSFQL 190
                                                                                                                                                                9
                                                                                                                                                                                                                                                                            70 -GH-----SSSLDAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSF 123
                                                                                                                                                                                                                                                                                                                                 58 -----HLADSPAV-----69
                                                                                                                                                                                                                                                                                                                                                                                                           77 SQSSEKAI-----NLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTLEYQDSHSQQW 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00452; Bcl-2
Pfam; PF02180; BH4;
                                                                                                                                                                                                                                                                                                                                                                                    2 SQSNRELVVDFLSYKLSOKGYSNSQFSDVEENR----TEAPEETEAERETPSAINGNPSN 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR002475; BCL2_family.
InterPro; IPR00712; BCL2_family.
InterPro; IPR00393; BH4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD; MGI:88139; Bc121.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Immunity 7:629-639(1997).
EMBL; U51278; AAC53459.1; --
HSSP; P53563; 1AF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN-BG/CBA; TISSUE=THYMUS;

WEDLINE-98051053; PubMed=9390687;

Yang X.-F., Weber G.F., Cantor H.;

A novel Bcl-x isoform connected to the T cell receptor regulates

Temmonity 7.500 Colling.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus (Mouse).
Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JAN-1998 (TrEMBLrel. 05, Created)
01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            035844;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity 21.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                      7.0%; Score 119; DB 11; Length 233;
21.1%; Pred. No. 0.082;
tive 37; Mismatches 91; Indels 74; Gaps
                                                           Last sequence update;
Last annotation update;
                                                                                                                   235 AA.
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InterPro; IPRO0712; BC1_2.
InterPro; IPRO0712; BC1_2.
InterPro; IPRO0712; BC1_2.
InterPro; IPRO0303; BH4.
Pfam; PF00452; BC1_2; 1.
SMART; SM00337; BCL; 1.
SMART; SM00265; BH4; 1.
PROSITE; PS01062; BC1_2_FAMILY; 1.
PROSITE; PS01080; BH1; 1.
PROSITE; PS01289; BH3; 1.
PROSITE; PS01289; BH3; 1.
PROSITE; PS01289; BH3; 1.
PROSITE; PS01080; BH4_1; 1.
PROSITE; PS01080; BH4_2; 1.
PROSITE; PS0063; BH4_2; 1.
PROSITE; PS0063; BH4_2; 1.
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Best Local S
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=B6/CBA; TISSUE=THYMUS;
MEDLINE=98051053; PubMed=9390687;
Yang X.-F., Weber G.F., Cantor H.;
"A novel Bcl-x isoform connected to the T cell receptor regulates apoptosis in T cells.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Immunity 7:629-639(1997).
EMBL; U51277; AAC53458.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID-10090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             131 SRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEIFVTEGLSFQL 190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     191 QGHVPVASSSKKDEEEQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQDGLSYSVF 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   77 SQSSEKAI-----NLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTLEYQDSHSQQW 130
                                                                                                                                                                                           O9QWX2;
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                           247 KTITDQVLM-GVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENF 305
                                                                                                                                                                                                                                                   Q9QWX2
                                                                                                                                                                                                                                                                                                                                                   306 SPWIQQHGGWEKILGIS 322
                                                                                                                                                                                                                                                                                                                                                                                124 EQVVNELFRDGVN--WGRIVAFFSFGGALCVESVDKEMQV---LVSRIASWMATYLNDHL 178
MEDLINE-20350651, PubMed=10894153;
Rucker E.B. III, Dierisseau P., Wagner K.U., Garrett L.,
Rucker E.B., Flaws J.A., Hennighausen L.;
Wynshaw-Boris A., Flaws J.A., Hennighausen L.;
Wynshaw-Boris A., Flaws J.A., Hennighausen Cell survival and "Bol-x and Bax regulate mouse primordial germ cell survival and apoptosis during embryogenesis.";
                                                                                                                 Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                        179 EPWIQENGGW----GVS 191
                                                                                                                                                                                                                                                                                                                                                                                                                                         70 -GH-----SSSLDAREVIPMAAVKOALREAGDEFELRYRRAFSDLTSOLHITPGTAYOSF 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 58 -----HLADSPAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 SQSNRELVVDFLSYKLSQKGYSWSQFSDVEENR----TEAPEETEAERETPSAINGNPSW 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ocal Similarity
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                                                                                                                                                                         BCL-X (FRAGMENT).
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                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P53563; 1AF3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bc121.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             35; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 117; DB 1
Pred. No. 0.12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   649D914C2D5378F6 CRC64;
                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                    188 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 11; Length 235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----- 69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   88; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           78;
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 Query Match
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EMBL; AF088904; AAC72232.1; -.
HSSP; P53563; 1AF5:..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00452; Bc1-2; 1.
Pfam; PF02180; BH4; 1.
SMART; SM00337; BCL; 1.
SMART; SM00265; BH4; 1.
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InterPro; IPR000712;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR003093; BH4.
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PROSITE; PS01260; BH4_1; 1.
PROSITE; PS0063; BH4_2; 1.
PROSITE; PS50063; BH4_2; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                131 SRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEIFVTEGLSFQL 190
              InterPro: IPR003/15; BCL2_family.
InterPro: IPR000712; BCl_2.
InterPro: IPR000913; BH4.
InterPro: IPR003093; BH4.
Pfam; PF00452; BCL-2; 1.
Pfam; PF00452; BCL-2; 1.
SMART; SM00337; BCL: 1.
                                                                                                                                                                                                                                                         O9H1R6 PRELIMINARY; PRT; 188 AA.

Q9H1R6; Q9H1R6; Created)
01-MAR-2001 (TrEMBLrel 16, Last sequence update)
01-MAR-2001 (TrEMBLrel 19, Last annotation update)
01-DEC-2001 (TrEMBLrel 19, Last annotation update)
01-DEC-2001 (TrEMBLRE 1 (ISOFORM 1)) (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77 SOSSEKAI-----NLGKKKSSWKAFFGVVEKEDSOSTPAKVSAQGORTLEYQDSHSQQW 130
                                                                                                                                                                                                                                                                                                                                                                                                                                                              247 KTITDQVLM-GVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENF 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               191 OGHVPVASSSKKDEEEQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQDGLSYSVF 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                    124 EQVVNELFRDGVN--WGRIVAFFSFGGALCVESVDKEMQV---LVSRIASWMATYLNDHL 178
                                                                                                                                                                                                                                                                                                                                                                                      179 EPWIQENGGW 188
                                                                                                                                                                                                                                                                                                                                                                                                              306 SPWIQQHGGW 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 SOSNRELVVDFLSYKLSOKGYSWSOFSDVEENR----TEAPEETEAERETPSAINGNPSW 57
                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniara; Verteurata; Eucesc
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo
                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                 Homo sapiens (Human)
                                                                                                                                         Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                           NCBI_TaxID=9606;
                                                                                                                EMBL; AL160175; CAC
HSSP; Q07817; 1LXL
PROSITE; PS50062; BCL2_FAMILY; 1. PROSITE; PS01080; BH1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -GH-----SSSLDAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSF 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             54; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS50062;
PS01080;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bc121.
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                                                                                                                                     CAC10003.1: -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21126 MW; 4E62F8356D248E52 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BC1_2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6.8%; Score 116; DB 21.6%; Pred. No. 0.11;
                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      34; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 11; Length 188;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88; Indels 74;
                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _____ 69
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11;

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1
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                                                                                                                               Query Match
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                                                                                                                                                                              NON_TER
SEQUENCE
                                                                                                                                                                                              PROSITE; PS50062; BCL2_FAMILY; 1.
PROSITE; PS01080; BH1; 1.
PROSITE; PS01258; BH2; 1.
PROSITE; PS01259; BH3; 1.
                                                                                                                                                                                                                                                                                                            "Novel cDNA structure and genomic organization of apoptosis regulatory gene Bcl-x-gamma.",
Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF133282; AAK15455.1;
EMBL; AF133281; AAK15455.1;
HSSP; P53563; 1AF3.
                                                                                                                                                                                                                                                             InterPro; IPR002475; BCL2_family.
InterPro; IPR000712; Bcl_2.
Pfam; PF00452; Bcl-2, 1.
SMART; SM00337; BCL; 1.
                            86 LGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTLEYQDSHSQQWSRCLSNVEQCLEHEA 145
1 LSQKGYSWSQFSDVEENR----TEAPEETEAERETPSAINGNPSW-------HLA 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN=129/SVJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUN-2001 (TremBLrel. 17, Created)
01-JUN-2001 (TremBLrel. 17, Last sequence update)
01-DEC-2001 (TremBLrel. 19, Last annotation update)
B-CELL LEUKEMIA/LYMPHOMA X (FRAGMENT).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q99N35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         171 ATYLNDHLEPWIQENGGW 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             298 TKYLKENFSPWIQQHGGW 315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116 PGTAYQSFEQVVNELFRDGVN--WGRIVAFFSFGGALCVESVDKEMQV---LVSRIAAWM 170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 239 DGLSYSVFKTITDQVLM-GVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFG 297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                183 TEGLSFQLQGHVPVASSSKKDEEEQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQ 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123 QDSH9QQWSRCLSNVEQCLEHEAVDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEIFV 182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PROSITE; PS50063; BH4_2; 1.
NON_TER 188 188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 -NGAT----GH-----SSSLDAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHIT 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE 188 AA; 21029 MW; 7074B6095145C324 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                77 SQSSEKAI-----NLGKKKSSWKAFFGVVEK-----EDSQSTPAKVSAQGQRTLEY 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 SQSNRELVVDFLSYKLSQKGYSWSQFSDVEENRTEAPEGTESEMETPSAING------ 53
                                                                                                                                                     217 AA; 24234 MW; 3B5A4E809A7DEF18 CRC64;
                                                                    ilarity 21.2%; Score 115; DB 11; Length 217; Conservative 34; Mismatches 88; Indels 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54;
                                                                                                                                                                                                                                                                                                                                                                                                                                      , Cantor H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6.7%; Score 115; DB 4; Length 188; 20.9%; Pred. No. 0.13; 4 Length 188; ative 34; Mismatches 80; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
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                                                                68; Gaps
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124 EQVVNELERDGVN--WGRIVAFESEGGALCVESVDKEMQV---LVSRIATWMATYLNDHL 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ъ
                     247 KTITDQVLM-GVDPRGESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENF 305
                                                             191 QGHVPVASSSKKDEEEQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQDGLSYSVF 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
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                                                                                                                      131 SRCLSNVEQCLEHEAVDÞKVISIANRVAEIVYSWÞÞÞQATQAGGFKSKEIFVTEGLSFQL 190
                                               69 TGH-----SSSLDAREVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSF 123
                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                               35 ----TEAPEGTESEAETPSAIN-GNP------SWHLADSPAVNG------A 68
                                                                                                                                                                                                                                                                                                                                                SMART; SM00337; BCL; 1.
SMART; SM0035; BH4; 1.
PROSITE: PS50062; BCL2_FAMILY; 1.
                                                                                                                                                                                                                                                                                                                      PROSITE; PS01258; BH2; PROSITE; PS01259; BH3;
                                                                                                                                                                                                                                                                                                                                            PROSITE; PS01080; BH1;
                                                                                                                                                                                                                                                                                                    PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                     InterPro: IPR002475; BCL2_family.
InterPro: IPR00712; Bcl_2.
InterPro: IPR003093; BH4.
Pfam; PF00452; Bcl_2; 1.
Pfam; PF02180; BH4; 1.
                                                                                                                                                                      77 SQSSEKAI-----NLGKKKSSWKAFFGVVEKEDSQSTPAKVSAQGQRTLEYQDSHSQQW 130
                                                                                                                                               O9NIA2 PRELIMINARY; PKT; 233 km.
O9NIA2; PRELIMINARY; PKT; 233 km.
O1-OCT-2000 (TrEMBLrel. 15, Created)
O1-OCT-2000 (TrEMBLrel. 15, Last sequence update)
O1-DEC-2001 (TREMBLREL. 19, Last annotation update)
ANTI_APOPTOTIC REGULATOR BCL-XL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases. HSSB; Q07817; 1MAZ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lee T.L., Canty J.M.,
"PCR Cloning of a Porcine bcl-xL cDNA from Heart.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-HEART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 WGRIVAFFSFGGALCVESVDKEMQV---LVSRIASWMATYLNDHLEPWIQENGGWDTFVD 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 178 L 178
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             261 GESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENFSPWIQOHGGWEKILG 320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      206 EQI-LAKIVELLKYSGDQLE---RKLKKDKALMGHFQDGLSYSVFKTITDQVLM-GVDPR 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           146 VDPKVISIANRVAEIVYSWPPPQATQAGGFKSKEIFVTEGLSFQLQGHVPVASSSKKDEE 205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63 EVIPMAAVKQALREAGDEFELRYRRAFSDLTSQLHITPGTAYQSFEQVVNELFRDGVN-- 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45 DSPAV-----GH-----SSSLDAR 62
                                                                                                                                                                                                                                                                                               PS50063;
                                                                                                                                                                                                                                                                                  233 AA;
                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                              BH4_1; 1.
BH4_2; 1.
.; 26047 MW; 2FA312818B25E17D CRC64;
                                                                                                                                                                                                                            6.78;
                                                                                                                                                                                                    34; Mismatches 89; Indels
                                                                                                                                                                                                                      Score 115; DB (
Pred. No. 0.17;
                                                                                                                                                                                                                         _ DB 6; Length 233;
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8 8

306 SPWIQQHGGWE 316 ||||::|||: 179 EPWIQENGGWD 189

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RESULT
Q9LXU9
    RESULT 15
Q9UKN3
ID Q9UKN3
AC Q9UKN3
DT 01-MAY
DT 01-MAY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9LXU9 PRELIMINARY; PRT; 562 AA.
Q9LXU9;
Q1-QCT-2000 (TrEMBLrel. 15, Created)
Q1-QCT-2000 (TrEMBLrel. 15, Last sequence update)
Q1-QCT-2000 (TrEMBLrel. 15, Last annotation update)
HYPOTHETICAL 63.3 KDA PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Arabidopsis thaliana (Mouse-ear cress).

Bukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;

Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;

peurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T24H18_70.
Q9UKN3 PRELIMINARY;
Q9UKN3;
Q1-MAY-2000 (TrEMBLrel. 13,
Q1-MAY-2000 (TrEMBLrel. 13,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EU Arabidopsis sequencing project;
Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases
EMBL; AL353013; CABB8254.1; -.
Hypothetical protein.
SEQUENCE 562 AA; 63328 MW; CFDB25EC6ED529F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bevan M., Robben J., Grymonprez B., Volckaert G., Bancroft Mewes H.W., Rudd S., Lemcke K., Mayer K.F.X.; Submitted (APR-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                   163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         128
                                                                                                                                                                                                                                                  418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               115 QGQRTLEYQ-----DSHSQQWSRCLSNVEQCLEH----EAVDPKVISIANRVAEIVY 162
                                                                                                                                                                                                          307
                                                                                                                                                                                                                                                                                                                                                                                                               305 ----SQENSGGRSSGKKNSEMPVSE--EVMVEGFLQIVSEARLSIKQFLKTLVSEIDEED 358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           246 SGVEKLKRELMEANRSRDAALTQVSEMKSSLGELSEKLQYLESYCDNLKKALREATEVV- 304
                                                                                                                                                                    466 NWTRPWSEQ 474
                                                                                                                                                                                                                                                                                                                                                                     207 QILAKIVELLKYSGDQLERKLKKDKALMGHFQDGLSYSVFKTITDQVLMG------VDPR 260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31 TRHHVFKSTPALFSPKL-------LRTRSLS-----QRGLGNCSANESWTEVS 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 72 WPCRNSQS---SEKAINLG------KKKSSWKAFF---GVVEKEDSQSTPAKVSA 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -PLTDSHSAVVSSQPRNRGGRVMSWLFPKLKKKQKSNSIFNSPSITEKSEEVSEVLKDSG 245
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SHHHVYTMSDALRSPPLHFYTTGRSNCGSVDFRSVSSCNDYNKQKGFDTKSLKSSNLVV- 186
                                                                                                                                                                                                                                                                                       GESEVKAQGFKAALVIDVTAKLTAIDNHPMNRVLGFGTKYLKENFS---------
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SWPPPQATQAG---GFKSKEIFVTEGLSFQLQGHVPVASS-----SKKDEEE 206
                                                                                                                                                                                                          ----PWIQQ 311
                                                                                                                                                                                                                                               QDRQANESSE---
                                                                                                                                                                                                                                                                                                                               STLIGNINTL-LQPHNLSFTSKYSKIIQYHLEAIISQSVYQDFENCVFQKNGKPKLLDPE 417
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                  ---ASLRNLSWNEVLKKGTKYYSDEFSRFCDEKMSLIITTL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43; Mismatches 136; Indels 110;
      Created) '
Last sequence update)
                                                                   PRT;
                                                                   386 AA.
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Search completed: June 19, Job time: 397 sec
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"Mill, a novel human gene encoding mitochondria located propromoting cell survival.";

Submitted (Apr-1999) to the EMBL/GenBank/DDBJ databases.

EMBL, AF146568; AAF03602.1; -.

R EMBL; AF146568; BCL2_family.

R InterPro; IPR002475; BCL2_family.

R InterPro; IPR000712; Bcl_2.

R InterPro; IPR000712; Bcl_2.

R Pfam; PF00452; Bcl-2; 1.

R Pfam; PF00452; BCl-2; 1.

R PARSTTE; PS50062; BCL2_FAMILY; 1.

SEQUENCE 386 AA; 41726 MW; BBF2B17507D81BC7 CRC64;
                                                                                                                                                                                                                                                                        Query Match 6.6%; Score 113.5; DI Best Local Similarity 26.1%; Pred. No. 0.46; Matches 31; Conservative 25; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MIL1 PROTEIN.

Homo sapiens (Human).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=9606;
                                                                                                                                                                                                                            214 ELLKYSGDQLERKLKK--DKALMGHFQDGLSYSVFKTITDQVLMGVDPRGESEVKAQGFK 271
                                                                                                                                                272
                                                                                                        53 KILVPLVLLRQMLLELTRLGQEPISALLQFGVTYLEDYSAEYIIQQGGWGTVFSLESEE
                                                                                                                                                                                         3 DCLAHLGEKVSQELKEPLHKALQMLLSQPVTYQAFRECT------LETTVHASGWN 52
                                                                                                                                             AALV-----IDVTAKLTAIDNHPMNRVLGFGTKYLKENFSPWIQQHGGWEKILGISHEE 325
                        2002,
                                                                                                                                                                                                                                                                                                                 DB 4; Length 386;
                                                                                                                                                                                                                                                                              46; Indels
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